

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Listing of Claims:

1-44 (Cancelled)

45. (Currently Amended) An immunological vaccine delivery composition comprising:
a calcium phosphate and an immunogen ~~active agent~~ which elicits ~~is present in an amount~~
~~sufficient to elicit~~ a host immune response that protects a host against a pathogen;
wherein said composition is formulated as a hardenable, injectable paste having a solids
content of greater than or equal to 40 wt%.

46. (Currently Amended) The composition of claim 45, wherein said immunogen ~~active~~
~~agent~~ is selected from the group consisting of
a bacteria, or fragment thereof, a virus, or fragment thereof, a nucleic acid molecule, a
protein, a hapten, a tolergen, and an allergen.

47. (Previously Presented) The composition of claim 45, wherein said calcium
phosphate comprises particles having a diameter between 0.1 nm and 900 nm.

48. (Previously Presented) The composition of claim 47, wherein said particles comprise
25-100% by weight of said composition.

49. (Previously Presented) The composition of claim 45 further comprising an adjuvant.

50. (Previously Presented) The composition of claim 49, wherein said adjuvant is selected from the group consisting of muramyl dipeptide, aluminum hydroxide, aluminum phosphate, hydroxyapatite, Incomplete Freund's adjuvant, and Complete Freund's adjuvant.

51. (Previously Presented) The composition of claim 49, wherein said adjuvant is selected so as to elicit an immune response from targeted cells or cell types.

52. (Previously Presented) The composition of claim 49, wherein said adjuvant is selected so as to elicit an immune response from cells of the same type.

53. (Previously Presented) The composition of claim 49, wherein said adjuvant is selected so as to elicit an immune response from cells of different types.

54. (Previously Presented) The composition of claim 49, further comprising an endogenous adjuvanticity enhancing means.

55. (Cancelled)

56. (Previously Presented) The composition of claim 45 further comprising a cytokine.

57. (Previously Presented) The composition of claim 56, wherein said cytokine is selected from the group consisting of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-11, IL-13, G-CSF, IL-15, GM-CSF, OSM, LIF, IFN- γ , IFN- α , IFN- β , B7.1, B7.2, TNF- α , TNF- β , LT- β , CD40 ligand, Fas ligand, CD27 ligand, CD30 ligand, 4-1BBL, IL-8, MCP-1, MIP- α , MIP- β , RANTES, TGF- β , IL-1 α , IL-1 β , IL-1 RA, IL-10, IL-12, and MIF.

58. (Previously Presented) The composition of claim 45, wherein said calcium phosphate comprises amorphous calcium phosphate, nanocrystalline calcium phosphate, poorly crystalline calcium phosphate, dicalcium phosphate dihydrate, tricalcium phosphate, tetracalcium phosphate, monetite, monocalcium phosphate monohydrate, octacalcium phosphate, or hydroxyapatite.

59. (Currently Amended) A method for stimulating an immune response in a mammal, said method comprising:

administering to the mammal a composition comprising a calcium phosphate and an immunogen active agent which elicits ~~is present in an amount sufficient to elicit~~ a host immune response that protects a host against a pathogen, and

wherein said composition is formulated as a hardenable, injectable paste having a solids content of greater than or equal to 40 wt%.

60. (Currently Amended) A method for increasing immunogenicity of an antigen in a mammal, said method comprising:

co-administering both an immunogen which elicits ~~active agent in an amount sufficient to~~
~~elicit~~ a host response that protects said mammal against a pathogen and a composition
comprising a calcium phosphate formulated as an injectable paste having a solids content of
greater than or equal to 40 wt%.

61 (Currently Amended) The method of claim 59 or 60, wherein said immunogen ~~active~~
~~agent~~ is selected from the group consisting of a bacteria, or fragment thereof, a virus, or fragment
thereof, a nucleic acid molecule, a protein, a hapten, a tolergen, and an allergen.

62. (Previously Presented) The method of claim 59 or 60, wherein said calcium
phosphate comprises particles having a diameter between 0.1 nm and 900 nm.

63. (Previously Presented) The method of claim 62, wherein said particles comprise 25-
100% by weight of said composition.

64. (Previously Presented) The method of claim 59 or 60, wherein said composition
further comprises an adjuvant.

65. (Previously Presented) The method of claim 64, wherein said adjuvant is selected
from the group consisting of muramyl dipeptide, aluminum hydroxide, aluminum phosphate,
hydroxyapatite, Incomplete Freund's adjuvant, and Complete Freund's adjuvant.

66. (Previously Presented) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from targeted cells or cell types.

67. (Previously Presented) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from cells of the same type.

68. (Previously Presented) The method of claim 64, wherein said adjuvant is selected so as to elicit an immune response from cells of different types.

69. (Previously Presented) The method of claim 64, wherein said composition further comprises an endogenous adjuvanticity enhancing means.

70. (Previously Presented) The method of claim 59 or 61, wherein said composition further comprises a cytokine.

71. (Previously Presented) The method of claim 70, wherein said cytokine is selected from the group consisting of IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-9, IL-11, IL-13, G-CSF, IL-15, GM-CSF, OSM, LIF, IFN- γ , IFN- α , IFN- β , B7.1, B7.2, TNF- α , TNF- β , LT- β , CD40 ligand, Fas ligand, CD27 ligand, CD30 ligand, 4-1BBL, IL-8, MCP-1, MIP- α , MIP- β , RANTES, TGF- β , IL-1 α , IL-1 β , IL-1 RA, IL-10, IL-12, and MIF.

72. (Previously Presented) The method of claim 59 or 60, wherein said calcium

phosphate comprises amorphous calcium phosphate, nanocrystalline calcium phosphate, poorly crystalline calcium phosphate, dicalcium phosphate dihydrate, tricalcium phosphate, tetracalcium phosphate, monetite, monocalcium phosphate monohydrate, octacalcium phosphate, or hydroxyapatite.